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APPLICATION OF NEW TECHNOLOGY TO CONFERENCE SERVICING

Note by the Secretariat

INTRODUCTION

1. During its 1990 and 1991 substantive sessions, the Committee on Conferences considered conference room papers (A/AC.172/1990/CRP.3 and A/AC.172/1991/CRP.7, respectively) on the application of new technology to conference servicing. The Committee noted that, in view of its responsibility to make recommendations on conference servicing world wide, it should be fully informed about present and planned applications of new technology not only at New York and Geneva, but also at all other United Nations conference centres and requested the Secretariat to prepare for its consideration a report that would include completed and updated information on applications of new technologies, present and planned, for all conference centres of the United Nations, including those at the Regional Commissions. The present note, prepared in consultation with all United Nations conference centres, is submitted in compliance with the request of the Committee. It supplements information contained in the report submitted to the Committee at its 1991 substantive session.

GOALS AND OBJECTIVES

2. The application of technological innovations within the Office of Conference Services (OCS) is carried out within the framework of Secretariat-wide policies and programmes established by the strengthened interdepartmental Technological Innovations Board (TIB); representatives of OCS will continue to participate actively in the work of the Board, its Working Committee and other

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* A/AC.172/150/Add.1.

subsidiary bodies. OCS will also continue its close cooperation with the Office of General Services, which is responsible for planning and implementing telecommunications and technological innovations for the Organization, for providing overall policy and technical guidelines in matters relating to computers, office equipment and telecommunications and for enforcing standards set by the TIB.

3. The overall strategy of the Technological Innovations Programme (TIP) for OCS has two main goals:

(a) Increasing the cost-effectiveness of processes within OCS; and

(b) Enhancing the quality and timeliness of the services provided to Member States, delegations, Secretariat staff and others.

4. These goals can be realized only with the active participation of the managers in the divisions and organizational units. Managing the change that accompanies the introduction of technological innovations can be a formidable challenge. In addition to the challenge for managers, strong staff participation is necessary to apply the new technologies, to learn how to use new tools and to cope with the additional, albeit, inevitable, workload during the transition period. The concept of assigning "focal points" or "technical specialists" in each area where technological innovations are being introduced is intended to promote "user-involvement". At this point in time, the technical specialists provide day-to-day operational, administrative and "help desk" support to users of new technologies in their areas under the guidance of, and backed up by the expertise of, the staff in the TIP unit.

5. Productivity gains attributable to technological innovations in OCS were first achieved with the use of word-processing systems in the typing units, Forward Echelon and the Correspondence Unit. Between 1981 and 1987, the units at the United Nations Headquarters that had been converted to word processing surrendered 20 of 323 established posts and did not recruit against 2 temporary posts authorized for 1987. In that same year they reduced their temporary assistance staff for the General Assembly sessions from the planned number of 80 to 48, i.e. by 40 per cent. At the same time, their output in 1987 was about 21 per cent greater than in 1981. This reduction in temporary assistance requirements has continued; for the forty-seventh session of the General Assembly, only 46 temporary staff were requested for the pools. Despite a further reduction of 37 established posts during the retrenchment exercise in 1988-1989 - bringing the total savings in established posts to 18 per cent between 1980 and 1989 - the text-processing pools have been able to cope with a 13 per cent increase in workload between 1989 and 1991 with no loss in quality or timeliness of output. Headquarters took the lead in introducing word processing in Russian, Arabic and Chinese. Standards were developed, and close cooperation in this area is ongoing with the United Nations offices at Geneva, Vienna, Nairobi and the Regional Commissions.

6. The Document Recording, Information and Tracking System (DRITS), the computerized job scheduling, monitoring and tracking system for documents and publications processed by OCS, became fully operational on 1 July 1991 after an extensive adjustment and testing period of one year in parallel with the previous system, which was based on the multi-part D-2 form. In addition to registering, scheduling and tracking jobs, the system has considerable capabilities for inquiring and reporting. The database also produces managerial

planning and control reports, as well as basic statistical information on the workload of OCS. Bar code technology is used to facilitate easy and accurate tracking of jobs. All users of DRITS use standard IBM-compatible microcomputers to access the system.

7. The number of users is increasing steadily, and more and more author departments are connected to DRITS and can submit their document processing requests electronically. This expansion is limited by the capacity and speed of the present minicomputer on which DRITS runs; plans have been prepared to replace the machine in the near future. The implementation of the wiring and data network for the Secretariat will also contribute to easier access to DRITS by more users.

8. At the present time, Headquarters is providing assistance to Conference Services in Geneva to adopt the New York DRITS system and adjust it to run on Geneva's equipment and network. The experiences gained in New York are thus fully available to Geneva.

9. The introduction of DRITS led to a reduction of two clerical posts in each of the language services of the Translation and Editorial Division in the past two biennia. DRITS facilitates the planning and timely production of documents by providing supervisors with information on jobs in the pipeline, jobs in progress and jobs completed at each stage of processing. The system should thus lead to improvements in the timely distribution of documents to delegates, a matter of growing concern to Member States.

10. During 1991, the volume of work in Documents Control increased markedly. Up to and including 1989, the number of documents for processing remained fairly constant at a level of about 43,000 or 44,000 jobs per year. In 1990, close to 47,000 jobs were processed, reflecting an increase of 5.7 per cent in comparison with 1989. In 1991, an unprecedented level of over 57,600 jobs were processed, reflecting a further increase of 23 per cent over 1990. In 1990 and 1991, the number of permanent staff and the level of temporary assistance in Documents Control did not increase. Overtime hours worked increased only by 0.4 per cent in 1990 and by 7.6 per cent in 1991, much less than the total volume of work. The introduction of DRITS has thus enhanced productivity and efficiency in the documents processing sections.

11. The Verbatim Reporting Section has taken full advantage of technological innovations and most reporters are using personal computers to produce their draft documents. The word-processing system in the Section was finally linked with the computerized voting system in the General Assembly Hall. Voting records are now transmitted electronically and incorporated into verbatim reporting documents without having to be retyped. Tedious checking and rechecking of voting results by typists and editors has been drastically reduced.

12. In 1989, TIP introduced Optical Character Recognition (OCR) scanning technology in the Secretariat. The scanners have been used successfully to convert documents from paper into word-processing files without the need for retyping of the document. The most conspicuous and useful application of this technology is in the Verbatim Reporting Section, which has made arrangements to obtain advance copies of speeches from delegates. Using an OCR scanner on a personal computer, the Section is able to scan the advance copies of speeches into word-processing documents which can be given to verbatim reporters for

finalization and/or translation. During the 1991 General Assembly session, 4,000 pages were scanned, saving a considerable amount of time and speeding up the release of records.

13. Based on a study by external expert consultants, the Publishing Division embarked on the introduction of in-house desktop publishing in 1991. An Electronic Publishing Unit was established within the Printing Section and a few desktop publishing workstations were acquired for the Electronic Publishing Unit, the Graphics Presentation Unit and the Copy Preparation and Proofreading Unit. Intensive training by outside experts and self-training by staff of the units took place in 1991 and in 1992. At the same time, and increasingly so as training progresses, typesetting jobs are given to trained staff instead of being sent to external typesetters, saving approximately $15 to $25 per page in external costs. Initially, this process has been applied to the production of official records. Electronic typesetting of publications was planned to follow successful completion of the official records project. The Conference Services Division in Geneva has led the way in this area by introducing a minicomputer-based electronic typesetting system for publications in 1990. Desktop publishing techniques are also in use at all other duty stations of the United Nations as a natural consequence of the gradual introduction of personal computers for staff of conference service units throughout the Organization.

14. Bar code technology and a system for tracking jobs and collecting workload statistics in the Production Control Unit in the Printing Plant were started in the fall of 1991 as planned in the 1990-1991 biennium budget. A full tracking system with 34 bar code tracking stations was completed successfully in 1992.

15. The system produces standardized job tickets with bar codes for all production steps in the printing plant. Jobs can quickly be located throughout the plant, allowing managers and supervisors to monitor schedules and priority jobs. Statistical and management information will be automatically collected. The system is currently being expanded to use a local area network of PC workstations as a subsystem of the DRITS.

STRATEGY AND OVERALL PLAN FOR THE REMAINING BIENNIA IN THE MEDIUM-TERM PLAN 1992-1997

16. The application of new technologies to conference services is concentrated in two major areas:

(a) The production and distribution of documents in all official languages, and

(b) The planning, coordination and support of conferences and meetings at all United Nations duty stations and special conference sites around the world.

17. With the introduction of personal computer workstations and data networks across all document processing stages, the Office of Conference Services is striving towards a "paperless" electronic production of documents. The extension of this network to overseas locations as part of the United Nations communications and networking strategy will permit the electronic distribution of documents and facilitate better utilization of conference-servicing resources at all duty stations.

18. Work is under way to combine local conference and meetings planning activities into a joint global computer-assisted planning and scheduling system. As the United Nations telecommunications network is gradually expanded, tele- and video-conferencing techniques will become a reality and the use of remote translation, editing, referencing and interpretation services will be expanded.

19. It has become evident that the application of new technologies to conference services is an ongoing integral part of all conference planning and support functions. For the past 15 years, the medium-term plans and each biennial budget for conference services has included an allocation of approximately 1.5 to 2 per cent of the total conference services budget for technological innovations activities. Cost estimates and budgetary allocations for conference services at each duty station or at special conference sites around the world will need to include the technological innovations component to ensure the same level of standard common conference support services at all conference sites.

Current technological innovations activities

Optical Disk System

20. The parliamentary documentation, stored on line in databases at United Nations Headquarters, New York, and the United Nations Office at Geneva and described/indexed using the structure of the United Nations Bibliographic Information System (UNBIS), includes pre-session, in-session and post-session documentation for meetings and conferences of the Security Council, the General Assembly and its subsidiary bodies, the Economic and Social Council and its subsidiary bodies and the Trusteeship Council. The documents are stored in all official languages of the United Nations: Arabic, Chinese, English, French, Russian and Spanish. Documents are stored to the greatest extent possible in coded form not only to reduce storage space requirements on the optical disk and accelerate transmission of documents through available communications lines but also to permit editors, translators and typists to reprocess texts retrieved from storage. The system started to store all Security Council documents in August 1992 and all Geneva documents from November 1992 onwards. All documents produced in Geneva and New York are planned to be available to users of the system from August 1993 onwards. It is planned to link all other conference sites of the United Nations for inputting and retrieval as soon as telecommunications facilities to these duty stations are upgraded.

21. Fully operational systems have been installed and the project has entered its second phase, which foresees the expansion of the document database to include all resolutions and decisions of the four main bodies of the United Nations back to 1946. As a priority in Phase II, missions of Member States in New York and Geneva will be given access to the system. This entails a gradual expansion of the capacity of the system to service a growing number of users at acceptable service levels and with adequate response time.

Document Recording, Information and Tracking System (DRITS)

22. Since 1991, several extensions of DRITS into specific processing areas such as translation services, the reproduction and distribution areas and the Printing Section are in progress. These subsystems will allow managers and supervisors to monitor work in progress in their areas of responsibility, while using the same job information and bar code tracking technology as DRITS.

23. The Conference Services Division in Geneva is in the process of making DRITS operational with the active assistance of the staff of the Technological Innovations Programme, New York, and by transferring New York's experience with DRITS directly to Geneva.

24. The United Nations Environment Programme at Nairobi and the United Nations Office at Vienna have developed their own production tracking and monitoring systems. The Inter-Agency Meeting on Language Arrangements, Documentation and Publications has been used to share the New York DRITS experience and achievements with representatives of other duty stations and specialized agencies.

Networking and communications

25. An electronic mail network is fully operational in OCS. It is linked to and integrated with the Secretariat-wide electronic mail system. TIP is currently working on enhancing the use of the network for the easy transmission of documents, in particular in WordPerfect format, between users in New York and between New York and overseas duty stations.

26. The DRITS network was expanded by a modem connection which allows UNDP and UNICEF to access DRITS via the public telephone network. This connection also permits TIP staff to provide assistance after business hours by diagnosing and resolving problems remotely from personal computers at home.

27. Facsimile devices were acquired for a number of users throughout OCS. During the biennia 1990-1991 and 1992-1993, facsimile machines were installed in the Printing Section, in the Coordination and Records Unit, in the Official Records Editing Section, in the Office of the Director for Conference Services, in the Publications Board's secretariat, in the Planning and Meetings Servicing Section, in the Contractual Translation Unit, in the Meetings Servicing Unit, in Forward Echelon, in the Verbatim Reporting Section, in the Document Referencing and Terminology Section and in the Journal Unit.

Conversion from Wang to WordPerfect

28. The Journal Unit was the first unit to convert to the new word-processing standard of the Secretariat. The desktop publishing features of the new software WordPerfect have improved the readability and appearance of the Journal. The Journal is also transmitted to the Department of Public Information (DPI) each day and is available to missions and Secretariat staff electronically through DPI's UNPRESS/JOURNAL on-line database on the Secretariat's mainframe. Facsimile communications enable offices to transmit their submissions for the Journal more easily and more promptly.

29. A plan for the transition of the typing pools, Forward Echelon, the Verbatim Reporting Section and the Correspondence Unit to the new word-processing standard has been completed and will be in place by the summer of 1993.

On-screen editing

30. In 1992, the Editorial Control and the Official Records Editing Section started to use personal computer workstations for on-screen editing and computerized referencing. It is now possible to envisage a seamless flow of

work from verbatim reporters and typists through editors, both in OCS and substantive offices, to the electronic publishing stations in the Publishing Division without the need to retype parts or all of a document because of editorial or other changes.

Machine-assisted translation

31. The introduction of some personal computer workstations in all Services has resulted in an enthusiastic response in adapting and effectively using this technology for machine-assisted translation. The Documentation, Reference and Terminology Section is working closely with all Services to share solutions in the referencing and terminology areas. At the same time, the workstations were selected and designed to be connected to the optical disk system.

Conference planning and interpreter assignment

32. Work on the computerized database of conferences and meetings is continuing in the Planning and Meetings Servicing Section. Meanwhile, the same database is being used by the Interpretation Service to schedule interpreters and determine their assignments to specific meetings. The interpreter assignment programme has been in full use in the Interpretation Service since April 1991. This application is the first project using a true expert system or artificial intelligence system approach, since it required the transfer of all rules, formal and informal, and all exceptional decisions which were used by the Programming Officer to schedule and assign interpreters into a computer programme. This system produces valuable planning, managerial and statistical information for the Service.

33. The computer programs for conference planning and interpreter assignment have been made available to Geneva and are being assessed by the Conference Services Division in Geneva to enable that Division to benefit from the experience gained with these systems at Headquarters.